

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference K 2426	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/DE97/01332	International filing date (day/month/year) 24 June 1997 (24.06.1997)	Priority date (day/month/year) 25 June 1996 (25.06.1996)
International Patent Classification (IPC) or national classification and IPC C07H 1/06, 21/00, C12Q 1/68		
Applicant DEUTSCHES KREBSFORSCHUNGSZENTRUM STIFTUNG DES ÖFFE		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.  <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>5</u> sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 19 January 1998 (19.01.1998)	Date of completion of this report 17 September 1998 (17.09.1998)
Name and mailing address of the IPEA/EP European Patent Office D-80298 Munich, Germany Facsimile No. 49-89-2399-4465	Authorized officer  Telephone No. 49-89-2399-0

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DE97/01332

## I. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

- ☐ the international application as originally filed.
- ☒ the description, pages 1 - 9, as originally filed,  
 pages \_\_\_\_\_, filed with the demand,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the claims, Nos. 1 - 6, as originally filed,  
 Nos. \_\_\_\_\_, as amended under Article 19,  
 Nos. \_\_\_\_\_, filed with the demand,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 Nos. \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the drawings, sheets/fig 1/6 - 6/6, as originally filed,  
 sheets/fig \_\_\_\_\_, filed with the demand,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1 - 5	YES
	Claims	6 (?)	NO
Inventive step (IS)	Claims	1 - 6 (?)	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 6	YES
	Claims		NO

### 2. Citations and explanations

The following documents are considered to be closest prior art:

D1 = Solid Phase Symposium, Third International Symposium, Oxford, 1993, Weiler et al.: "New supports for large scale ..."; pages 131 - 134 [introduced by the examiner]

D2 = FR-A-2 529 892

D3 = Nucleic Acids Research, 1987, pages 3761 - 3772

#### Novelty (PCT Article 33(2))

So-called "oligomer chips", the use of which is the subject matter of Claim 6, are the end products of the claimed process.

These end products are not defined.

Consequently, a statement concerning novelty or inventive step is not possible.

For the case where known end products are also included, the question of unity arises (PCT Rule 13).

.../...

(Continuation of V.2)

Should these end products be novel, however, the applicants could file additional product claims.

Documents D2 and D3, which are cited as X documents in the search report, are not, in the examiner's opinion, very relevant, because the matrix surfaces are not modified with alkylamino.

Inventive step (PCT Article 33(3))

D1 pertains to a "large-scale" synthesis of oligonucleotides in which a [different] alkylamino [= methylamino]-modified matrix surface is used and which furthermore is characterized in that 3-succinate derivatives of protected nucleosides are bound to the matrix surface.

The process is therefore very obvious, particularly for the broadest claim.

It is admittedly correct that "beads" are used in D1 and "a matrix surface" is used in the application; an inventive step of this analogous use of the known method (cf. D1 and the description, page 2, second paragraph) should nevertheless be conclusively proved.

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## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Pursuant to PCT Rule 5.1(a)(ii), the description should cite document D1 and briefly outline the relevant prior art contained therein.